Working together for low-cost as well as low-carbon hydrogen

Categories: Chemicals, Ingredients & Auxiliary Materials, News, Processing Technologies

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Emerson, a well-known provider of industrial software and technology, today announced it has entered into a multi-year strategic framework agreement with BayoTech, an innovator in hydrogen solutions, to accelerate the delivery of hydrogen worldwide. Under this agreement, the company will provide advanced automation technology, software and products to help BayoTech build hundreds of hydrogen generators to produce cleaner, lower-cost hydrogen.

"Industries and organizations worldwide are seeking sustainable solutions to address their most pressing problems. The agreement between Emerson and BayoTech accelerates the development and adoption of hydrogen at scale, which is a game changer for diversifying our global energy mix."

- Mike Train, Chief Sustainability Officer

The modular hydrogen generators produce up to 1,000 kilograms per day, an amount sufficient to power up to 200 hydrogen fuel cell vehicles. This special patented technology requires fewer raw materials to produce hydrogen, generating fewer carbon emissions and reducing costs compared to conventional reformers. To meet the growing demand for hydrogen, BayoTech is using its core technology to develop 5-, 10- and 20-ton generators that will lead to further efficiency improvements. Combined with Emerson's programmable logic controllers and edge control technologies, remote monitoring capability and Microsoft Azure IoT Suite, the unmanned, fully autonomous skids can be operated and monitored from the company's headquarters in Albuquerque, New Mexico.

"The company's goal is to become the world's largest distributed hydrogen generator," said Mo Vargas, CEO. "Emerson's advanced technology is the right choice to support our vision of replacing the established centralized hydrogen supply chain with a new, highly efficient model of local autonomous production centers."

"The agreement between the two companies will make hydrogen technology accessible to more places around the world," said Linh Austin, COO. "As we build a sustainable - and more cost-effective - global hydrogen supply chain, we are jointly developing a solution that will reduce the carbon footprint of countless customers."

The hydrogen generators are already under construction and will be deployed at hydrogen centers, U.S. customer sites and other locations worldwide. These centers will deliver locally produced hydrogen to nearby customers via BayoTech's high-pressure gas transport and storage facilities. Using the facilities, three times more hydrogen can be transported per trip than with conventional steel pipe trailers. The higher payloads result in lower transportation costs, higher driver productivity and reduced carbon emissions.

The strategic framework agreement supports Emerson's commitment to providing innovative technologies and industry expertise in the rapidly evolving hydrogen sector. Climate-friendly hydrogen has diverse

energy and non-energy uses, ranging from renewable energy storage to fueling heavy-duty vehicles. The use of hydrogen enables numerous industries to choose clean energy as a cost-effective solution to their business needs.